

WHAT IS CLAIMED IS:

1. A security system for use with a locked subject having a lock that can be electronically activated, the
5 security system comprising:

a mechanical key for mechanically opening and closing the lock of the locked subject;

a portable device having a wireless communication function and including a key retainer for retaining the
10 mechanical key;

an activation controlling means for performing wireless communication between the locked subject and the portable device, wherein the locked subject outputs a request signal during the wireless communication, the portable device
15 outputs an ID code signal in response to the request signal, and the activation controlling means controls the activation of the lock in accordance with the ID code signal; and

a notifying means for notifying a driver whether the mechanical key is retained in the key retainer.

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2. The security system according to claim 1, wherein the notifying means includes:

a key detector arranged in the portable device to detect whether the mechanical key is retained in the key
25 retainer;

a portable device warning device arranged in the portable device to provide a warning; and

a portable device controller arranged in the portable device to control the portable device warning device to
30 provide the warning when the key detector detects that the mechanical key is not retained in the key retainer.

3. The security system according to claim 1, wherein

the notifying means includes:

a key detector arranged in the portable device to detect whether the mechanical key is retained in the key retainer;

5 a portable device controller arranged in the portable device for outputting a warning signal when the key detector detects that the mechanical key is not retained in the key retainer;

10 a locked subject warning device arranged in the locked subject to provide a warning; and

a locked subject controller arranged in the locked subject for controlling the locked subject warning device to provide the warning when receiving the warning signal.

15 4. The security system according to claim 1, wherein the notifying means includes:

a portable device warning device arranged in the portable device to provide a warning;

20 a locked subject warning device arranged in the locked subject to provide a warning;

a key detector for detecting whether the mechanical key is retained in the key retainer;

25 a portable device controller for controlling the portable device warning device to provide the warning and send a warning signal to the locked subject when the key detector detects that the mechanical key is not retained in the key retainer; and

30 a locked subject controller for controlling the locked subject warning device to provide the warning when receiving the warning signal.

5. The security system according to claim 2, wherein the portable device includes an operation portion that is

operated to output an ID code signal, and the portable device controller includes:

5 a manual activation controlling means for sending the ID code signal to the locked subject when the operation portion is operated to manually control the locked subject in accordance with the ID code signal from the portable device controller; and

10 an disabling means for disabling the opening and closing of the lock of the locked subject with the activation controlling means or the manual activation controlling means when the mechanical key is not retained in the key retainer.

6. The security system according to claim 1, wherein
15 the locked subject is a vehicle including an electric device and an engine, and the security system disables at least one of activation of the electric device and starting of the engine when the mechanical key is not retained in the key retainer.

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7. A security system for use with a locked subject having a lock that can be electronically activated, the security system comprising:

25 a mechanical key for mechanically opening and closing the lock of the locked subject;

a portable device including a key retainer for retaining the mechanical key, the portable device performing wireless communication with the locked subject;

an operation portion arranged on the portable device;

30 a manual activation controlling means including a first control for performing control of the wireless communication between the locked subject and the portable device, and a second control for sending an ID code signal to the locked

subject and activating the lock when the operation portion is operated; and

a disabling means for disabling at least one of the controls of the manual activation controlling means when the key retainer is not retained in the mechanical key.

8. The security system according to claim 7, wherein the portable device includes:

a receiver circuit for receiving a request signal output from the locked subject;

a portable device controller for sending a warning signal to the locked subject when the mechanical key is not retained in the key retainer;

a signal line arranged between the portable device controller and the receiving circuit; and

wherein the disabling means includes contacts arranged on the signal line, the contacts closing the signal line when the mechanical key is retained in the key retainer and opening the signal line when the mechanical key is not retained in the key retainer.

9. The security system according to claim 7, wherein the portable device includes:

a power supply;

a receiver circuit for receiving a request signal output from the locked subject;

a portable device controller for sending a warning signal to the locked subject in response to the request signal when the mechanical key is not retained in the key retainer;

a power line arranged between the power supply and the receiving circuit; and

wherein the disabling means includes contacts arranged

on the power line, the contacts closing the power line when the mechanical key is retained in the key retainer and opening the power line when the mechanical key is not retained in the key retainer.

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10. The security system according to claim 7, wherein the portable device includes:

a receiver circuit for receiving a request signal output from the locked subject;

10 a portable device controller for sending a warning signal to the locked subject in response to the request signal when the mechanical key is not retained in the key retainer;

15 a ground line arranged between the portable device controller and the ground; and

wherein the disabling means includes contacts arranged on the ground line, the contacts closing the ground line when the mechanical key is retained in the key retainer and opening the power line when the mechanical key is not
20 retained in the key retainer.

11. The security system according to claim 7, wherein the locked subject is a vehicle including an electric device and an engine, and the security system disables at least one
25 of activation of the electric device and starting of the engine when the mechanical key is not retained in the key retainer.

12. A portable device for use in a security system
30 that includes a locked subject having a lock, wherein the security system controls opening and closing of the lock in accordance with an ID code signal, the portable device comprising:

a key retainer for retaining a mechanical key that mechanically opens and closes the lock; and

a key detector for detecting whether the mechanical key is retained in the key retainer, wherein the portable device
5 is operable for outputting the ID code signal.

13. The portable device according to claim 12, wherein the locked subject is a vehicle including an electric device and an engine, and the security system disables at least one
10 of activation of the electric device and starting of the engine when the mechanical key is not retained in the key retainer.

14. The portable device according to claim 12, further
15 comprising:

a notifying means for notifying a driver whether the mechanical key is retained in the key retainer.

15. A security system comprising:

20 a lock;

a mechanical key for mechanically opening and closing the lock;

a portable device including a wireless key that performs wireless communication and includes a key retainer
25 for retaining the mechanical key;

a lock controller for opening and closing the lock when wireless communication with the wireless key is established;

a sensor arranged in the wireless key to detect whether the mechanical key is retained in the retainer; and

30 a notifying device for notifying a person carrying the portable device that the mechanical key is being retained in the key retainer.

16. The security system according to claim 15, wherein the notifying device is one of or a combination of a light that is illuminated, a buzzer that emits a warning sound, and a vibration device that vibrates the portable device
5 when the mechanical key is not retained in the key retainer of the portable device.

17. The security system according to claim 16, wherein the lock is a door lock of a vehicle, the lock controller is
10 installed in the vehicle, and the notifying device includes a light that is arranged in the vehicle and activated when the mechanical key is not retained in the key retainer.

18. The security system according to claim 16, wherein
15 the lock is a door lock of a vehicle, the portable device includes an operation portion operated to open and close the door lock, and the lock controller is installed in the vehicle, the security system being provided with a keyless entry function that opens and closes the door when the
20 operation portion is operated in the vicinity of the vehicle, wherein the notifying device notifies the driver of the vehicle that the mechanical key is not retained in the key retainer by disabling at least one of starting of the engine and the keyless entry function.